

Alaska Oil & Gas Conservation Commission
December 18, 2018 Hearing
Written comments submitted to: Samantha.Carlisle@alaska.gov
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- I'm speaking today on behalf of the Alaska Climate Action Network, a statewide grassroots network of scientists, policy and renewable energy experts, partner groups and Alaskans from all walks of life who are worried about the increasingly dangerous and costly impacts of climate change, especially in rural Alaska.
- I would also like to thank the Commissioners French, Foerster and Seamount for granting this hearing in response to Kate Troll's request and the 48 Alaskan's who signed the petition at our Climate, Jobs & Justice rally in Anchorage on Sept 8th.
- Since then, nearly 300 more Alaskan's have joined in our appeal to the AOGCC Commission to do everything in your power to reduce Alaska's GHG emissions (petition attached).
- I won't repeat what others have already spoken to, but I would like to address Kate Troll's question: "**What is the track record for full compliance?**"
- On November 18th Kristen Nelson reported in the Petroleum News¹ that:
 1. The commission revised its flaring regulations effective Jan. 1, 1995. "The goal of the flaring oversight program is the **elimination of unnecessary flaring** whenever possible, and
 2. The commission's **current regulations allow no gas release except for up to an hour for emergencies or operational upsets or for planned lease operations** authorized for safety; to purge or test a safety flare system; and de minimus venting incidental to normal operations. The regulations also say the commission can authorize flaring for more than an hour *under specific circumstances*."
- We looked at the data, and here is what we found (disclaimer: we are not OG experts):
 - First, according to the 2018 Alaska Greenhouse Gas Emissions Inventory Report² that "describes and quantifies human-caused sources of greenhouse gas (GHG) emissions occurring between 1990 and 2015 from Alaska operations and facilities" the oil and gas industry contributed an average of 52% of Alaska's total GHG emissions equal to 44.5 million metric tons of carbon dioxide equivalents

¹ Petroleum News, AOGCC receives petition on gas flaring,
<http://www.petroleumnews.com/pdfarch/319393447.pdf#page=9>

² <https://dec.alaska.gov/commish/press-releases/2018/dec-releases-updated-alaska-greenhouse-gas-emissions-inventory-report/>

(MMT CO₂e)/per year or a cumulative total of 552 million metric tons of carbon dioxide equivalents.

- Based on these figures, between 1990 and 2015, average annual emissions from the oil and gas sector was 23.22 million metric tons of carbon dioxide equivalents (MMT CO₂e) (range: 20.26/2010 – 27.02/2005). That's equivalent to³:
 - 5 million passenger cars/year
 - 53.5 million barrels of oil/year, or 17% of California's total annual (320 MBO/year)
 - 3 million average U.S. household electricity use

Industrial	24.87	26.33	27.02	20.26	22.67	22.37	22.13	20.99	22.35
Coal/Coal Mining	0.026	0.026	0.024	0.038	0.045	0.038	0.029	0.028	0.022
Natural Gas/ Natural Gas									
Industry	13.95	18.70	19.13	14.12	14.00	14.44	14.24	14.30	14.94
Petroleum/Oil Industry	10.90	7.60	7.86	6.10	8.63	7.89	7.86	6.66	7.39

- Then we looked at data obtained directly from AOGCC. Between January 2012 and Feb, 2017 industry:
 - **Flared** = 17,374,472 million cubic feet (McF) of gas or just short of 3 million cubic feet (2,895,745 McF)/year, including:
 - **1,468 releases greater than > 1 hour**
 - Cumulative total of 12,742,668 McF (or 12.7 Billion cubic feet) of gas*
 - Range:
 - 747,534 McF in Pt. Thomson Exp on Apr 16, 2016 to
 - 1 Mcf at Ninilchik Falls Creek on July 1st, 2017.
 - 34 releases exceeded 100,000 McF including:
 - 3 from Pt. Thompson including the release just mentioned,
 - 9 from Prudhoe Bay Gathering Center 1
 - 3 from PBU GC2
 - 8 from PBU CGF B, and
 - 9 from Northstar. and
 - 1 from PBU GC3 (see Table 1 below).

***NOTE: 1 million metric tons of carbon dioxide equivalent = 216,000 passenger cars/year**

³ <https://www.arb.ca.gov/cc/factsheets/1mmtconversion.pdf>

	A	B	C	D	E	F	G	H	I	J
1	Year	RptDate	FacilityNo	Facility Name	blc	OPN	DisSol	DisRein	FlareGTR	FlareI
2	2016	01-Apr-16	890000001	Pt Thomson Exploration	0	118575	0	101081	747534	0
3	2014	01-Feb-14	290000032	PBU GC 2	0	112300	0	0	436111	9722
4	2012	01-Jul-12	290000031	PBU GC 1	0	112300	0	0	395787	250
5	2012	01-Jun-12	290000031	PBU GC 1	0	112300	0	0	362033	2020
6	2013	01-Apr-13	290000031	PBU GC 1	0	112300	0	0	360310	1862
7	2016	01-Apr-16	290000008	PBU CGF B	0	112300	1000976	4E+06	313559	163592
8	2016	01-Jun-16	890000001	Pt Thomson Exploration	0	118575	0	44561	263807	17836
9	2016	01-Oct-16	890000001	Pt Thomson Exploration	0	118575	0	722459	247420	3519
10	2012	01-Sep-12	290000031	PBU GC 1	0	112300	0	0	219885	9820
11	2013	01-Mar-13	290000031	PBU GC 1	0	112300	0	0	194364	0
12	2012	01-Feb-12	290000025	Northstar	0	112300	0	1E+07	152691	0
13	2014	01-Aug-14	290000008	PBU CGF B	0	112300	523153	2E+06	143496	12008
14	2016	01-Mar-16	290000008	PBU CGF B	0	112300	1501945	5E+06	135998	10430
15	2014	01-Oct-14	290000008	PBU CGF B	0	112300	1491944	7E+06	134503	3638
16	2016	01-Dec-16	290000008	PBU CGF B	0	112300	1645424	7E+06	126101	21864
17	2013	01-Feb-13	290000008	PBU CGF B	0	112300	1723259	6E+06	124369	1703
18	2016	01-Nov-16	290000033	PBU GC 3	0	112300	0	0	118507	0
19	2013	01-Feb-13	290000031	PBU GC 1	0	112300	0	0	116131	5481
20	2012	01-Feb-12	290000032	PBU GC 2	0	112300	0	0	116111	8785
21	2017	01-Jul-17	290000008	PBU CGF B	0	112300	950008	4E+06	115459	15406
22	2013	01-Jan-13	290000031	PBU GC 1	0	112300	0	0	112292	4967
23	2013	01-Nov-13	290000031	PBU GC 1	0	112300	0	0	111914	800
24	2013	01-Oct-13	290000031	PBU GC 1	0	112300	0	0	111355	880
25	2012	01-May-12	290000025	Northstar	0	112300	0	1E+07	107247	0
26	2012	01-Oct-12	290000025	Northstar	0	112300	0	1E+07	105582	0
27	2012	01-Mar-12	290000025	Northstar	0	112300	0	1E+07	104734	0
28	2013	01-Jan-13	290000025	Northstar	0	112300	0	1E+07	104310	0
29	2017	01-Mar-17	290000008	PBU CGF B	0	112300	1683032	7E+06	103982	387
30	2012	01-Nov-12	290000025	Northstar	0	112300	0	1E+07	102553	0
31	2012	01-Dec-12	290000025	Northstar	0	112300	0	1E+07	102246	0
32	2016	01-Nov-16	290000031	PBU GC 1	0	112300	0	0	101473	8984
33	2012	01-Jul-12	290000025	Northstar	0	112300	0	1E+07	101271	0
34	2012	01-Apr-12	290000025	Northstar	0	112300	0	1E+07	101004	0
35	2016	01-Apr-16	290000032	PBU GC 2	0	112300	0	0	98203	41667

Table 1: Releases exceeding 100,000 Mcf of flared gas, from AOGCC data

- As quoted in Petroleum News above and according to rule 20 AAC 25.235:
 - Section(d): Gas released, burned, or permitted to escape into the air constitutes waste, except that (1) flaring or venting gas for a period not exceeding one hour as the result of an emergency or operational upset is authorized for safety;
- We haven't yet received all the documents requested in our Public Information Request, so we were unable to compare the gas disposition report form's 10-422 (FACILITY REPORT OF PRODUCED GAS DISPOSITION) against the Xcel spread sheet data to determine if these were authorized releases. Even if we had as a small nonprofit, dependent on volunteers, we don't have the expertise or capacity to do the analysis (and we might well be off in the above calculation!). So in the end, we are left with more questions than answers, including:
 - Do these SUBSTANTIAL emissions fall under authorized emergency and normal operations and maintenance, or is something else going on?
 - In addition to the 1400+ releases greater than hour, we did not see where industry reports **vented** gas (presumably pure methane). The state GHG report (page 21) notes that:
 - In 2015, the industrial sector produced over half of Alaska's GHG emissions. Fugitive methane contributed over 19% of the CO2e emitted by this sector in 2015. **Most of the fugitive methane comes from oil production**; a small portion comes from natural gas production.*
 - Thus, how does the AOGCC track the more powerful methane GHG?
 - Additionally, we'd like to know how AOGCC data feeds into the state calculations of total GHG emissions, as required by the Federal Greenhouse Gas Reporting Rule? (we're essentially trying to relate the GHG report to industry disposition data),

We would very much appreciate answers to these questions!

It's important to note that these GHG emissions carry with them a whole suite of hazardous pollutants, including volatile organic compounds that have serious direct and indirect community and environmental health impacts⁴, including cancer, neurological, developmental and reproductive effects and the capacity to disrupt critical endocrine hormones.

In closing, as Bjorn Olsen with Alaskans Know Climate Change and I wrote in a recent [OpEd](#)⁵ (and it deserves repeating): “our civilization has little more than a decade to rein in greenhouse gas emissions or face a series of cascading ecosystem and economic collapses”. We urge you, as our duly appointed and trusted AOGCC commissioners, to do absolutely everything in your power to reduce waste, in the form of dangerous greenhouse gas emissions.

We are the front lines of climate change; let's get on the front lines of being the solution to climate change.

Thank you,

Ceal Smith

References

STATE OF ALASKA ALASKA OIL AND GAS CONSERVATION COMMISSION FACILITY REPORT OF PRODUCED GAS DISPOSITION				
1. Facility Number	2. Facility Name	3. Field	4. Operator	5. Month/Year of Disposition
Disposition		Volume MCF	20. For production from multiple pools, list contribution of each pool as a percent of Total Volume.	
6. Sold			Pool Name	Pool Code Percent
7. Rejected				
8. Flared or vented 1 hour or less				
9. Flared or vented more than 1 hour (see instr.)				
10. Pilot and Purge				
11. Assist Gas				
12. Fuel gas used in lease operations.				
13. Other (see instructions)				
14. TOTAL VOLUME (ITEMS 6-13)			Official Use Only	
15. NGL Gas Equivalent			Authorization >1 hr:	
16. Purchased gas			Safety	MCF
17. Transferred from:			Lease Use	MCF
18. Transferred to: (Express as a negative #)			Conservation	MCF
19. Remarks:			Waste:	MCF
I hereby certify that the foregoing is true and correct to the best of my knowledge.			Commissioner Date	
Signature _____ Title _____			Note: All volumes must be corrected to pressure of 14.65 psia and to a temperature of 60o F. Authority 20 AAC25.235.	
Printed Name _____ Phone _____ Date _____				

Form 10-422 Rev. 5/2009 INSTRUCTIONS ON REVERSE SIDE Submit in Duplicate

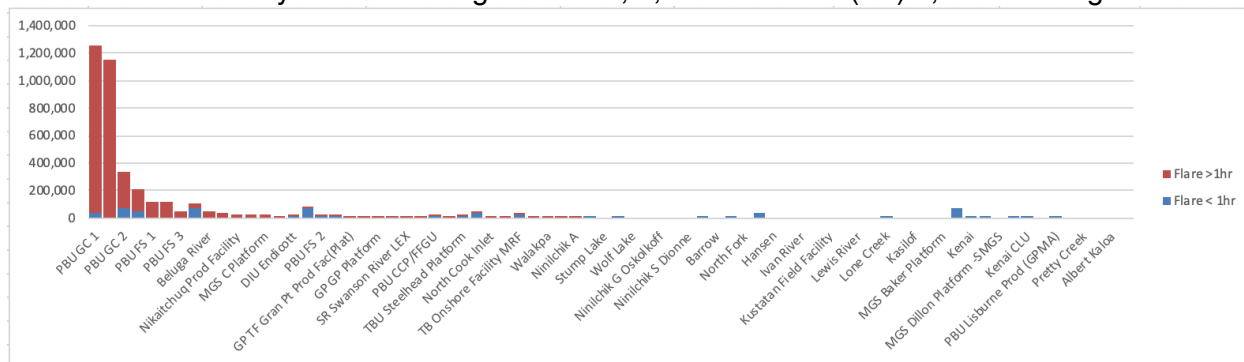
<http://doa.alaska.gov/ogc/forms/10-422.pdf>

⁴ <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6069077/>

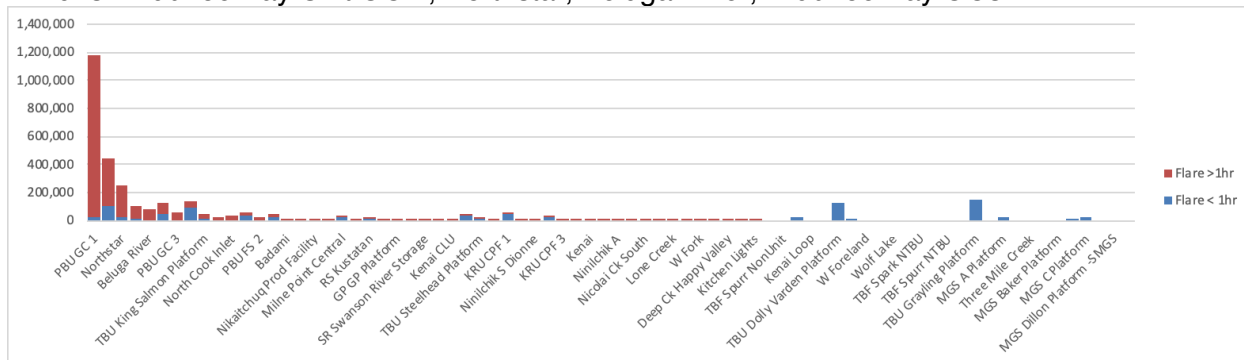
⁵ https://www.adn.com/opinions/2018/12/16/alaska-has-climate-solutions/?fbclid=IwAR0XrfWAKAeo2v36Tlqen1_baQUI1BFxxH1PIFcMWTEA0dB1aGE1DqQun1U#8046

The biggest emitters are the Prudhoe Bay Unit Gathering and Flow Stations, but Cook Inlet is also a significant contributor.

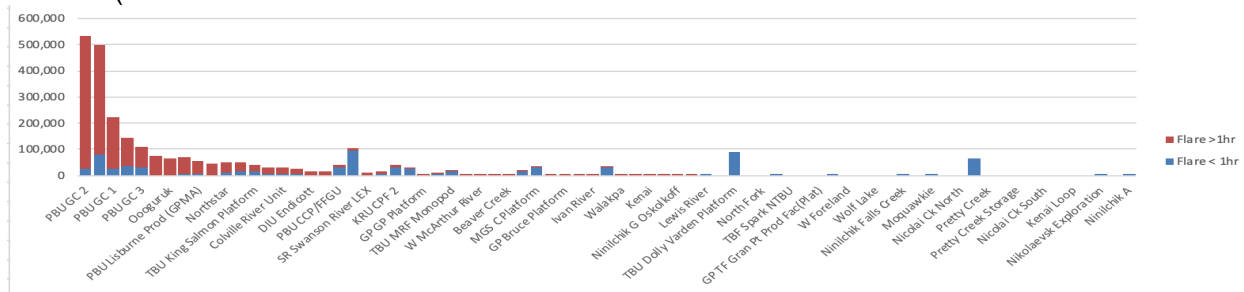
In 2012: Prudhoe Bay Unit/Gathering Center 1*, 2, Flow Station⁶ (FS) 1, 3 and Beluga River



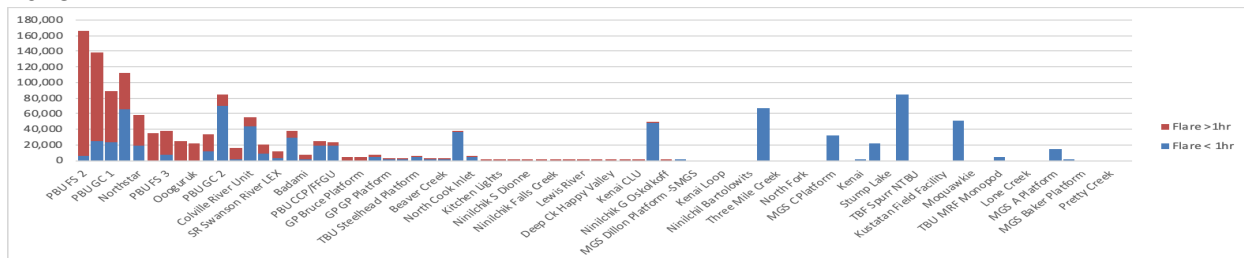
In 2013: Prudhoe Bay Unit GC 1, Northstar, Beluga River, Prudhoe Bay GC3



In 2014 (1million/million)

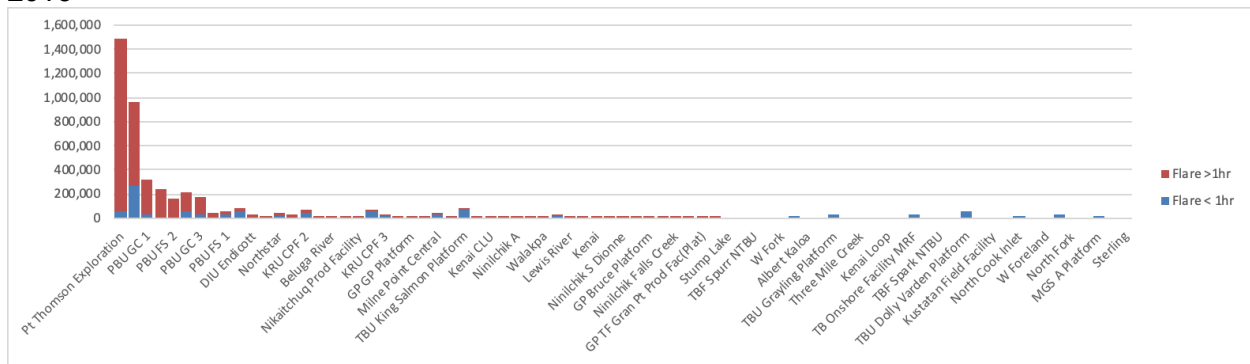


2015

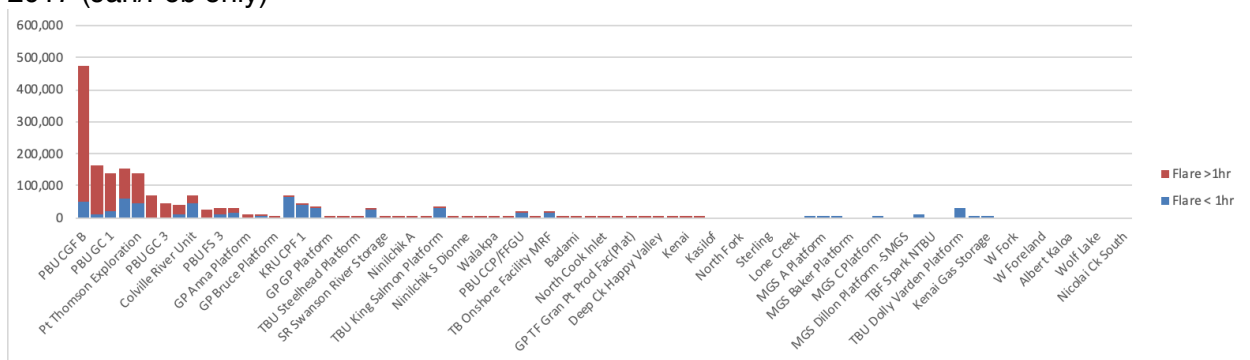


⁶ Fact Sheet Gathering Centers, Flow Stations, https://www.bp.com/content/dam/bp-country/en_us/PDF/alaska_separation_facilities_fact_sheet.pdf

2016



2017 (Jan/Feb only)



Precedence/Case history (from the 50-report):

“In 1970 alone, nine billion cubic feet of gas were flared from just one Cook Inlet oilfield, Granite Point,” “It was a huge amount of energy just going up in smoke,” recalls Norman, who is currently a Commissioner of the AOGCC.

The public [then, as now] was solidly on the side of the Commission. The gas flares could be seen from Anchorage on a clear night, and they became symbols of what the public considered to be wasteful practices.

In 1971, following extensive hearings, the Commission ordered an end to the wasteful flaring of gas produced along with oil from Cook Inlet platforms, except for what was needed for safety flares on the platforms. The Alaska Superior Court upheld the authority of the AOGCC in its action to prevent waste⁷ and (according to the 50-year “Our resources Our past Our future” report⁸). **The Commission’s ban on gas flaring was extended to Prudhoe Bay when this giant North Slope field began production in 1977.**

Any gas flared after the order, except for the safety flare, was determined to constitute “waste” of the natural gas resource and was prohibited.

⁷ <http://doa.alaska.gov/ogc/AboutUs/50th/aogcc50thBooklet.pdf>

⁸ <http://doa.alaska.gov/ogc/AboutUs/50th/aogcc50thBooklet.pdf>

“The companies didn’t want to stop flaring. They claimed there was no market for the gas and that it had no value.” But when forced to do so, the producers did find ways to use the gas beneficially

Applicable Statutes and Rules

§AS 31.05.027 gives AOGCC authority over all land in the state of Alaska lawfully subject to its police powers, including Federal lands,

§AS 31.05.095 clearly states, “the waste of oil and gas in the state is prohibited”,

§AS 31.05.170(15) defines “waste” in addition to its ordinary meaning, “physical waste” and includes the inefficient, excessive, or improper use of, or unnecessary dissipation of, reservoir energy; and the locating, spacing, drilling, equipping, operating or producing of any oil or gas well in a manner which results or tends to result in reducing the quantity of oil or gas to be recovered from a pool in this state under operations conducted in accordance with good oil field engineering practices; the inefficient above-ground storage of oil; and the locating, spacing, drilling, equipping, operating or producing of an oil or gas well in a manner causing, or tending to cause, unnecessary or excessive surface loss or destruction of oil or gas; and other producing oil or gas in a manner causing unnecessary water channeling or coning; the operation of an oil well with an inefficient gas-oil ratio; the drowning with water of a pool or part of a pool capable of producing oil or gas; underground waste; the creation of unnecessary fire hazards; the release, burning, or escape into the open air of gas, from a well producing oil or gas; the use of gas for the manufacture of carbon black; and the drilling of wells unnecessary to carry out the purpose or intent of this chapter; and

20 ACC 25.235. Gas disposition. (a) For each production facility the operator **shall compile and report monthly gas disposition and acquisition on the Facility Report of Produced Gas Disposition (Form 10-422)**. If a facility's production comes from multiple pools, the operator shall allocate production between each producing pool as a percentage of the total volume of gas that the facility handled for the month. The operator shall report gas acquisition or disposition by category, as follows:

- (1) gas sold;
- (2) gas reinjected;
- (3) gas **flared or vented*** (form only includes flared);
- (4) gas used for lease operations other than flaring or venting;
- (5) natural gas liquids (NGLs) produced;
- (6) gas purchased;
- (7) gas transferred;
- (8) other.

(b) Any release, burning, or escape into the air of gas other than incidental de minimis venting as authorized under (d)(4) of this section **must be reported as flared or vented** on the Facility Report of Produced Gas Disposition (Form 10-422). The operator **shall submit a written supplement for any flaring or venting incident exceeding one hour**. The supplement must describe why the gas was flared or vented, list the beginning and ending time of the flaring or venting, report the volume of gas flared or vented, and describe actions taken to comply with (c) of this section.

(c) The operator shall take action in accordance with good oil field engineering practices and conservation purposes to minimize the volume of gas released, burned, or permitted to escape into the air.

(d) **Gas released, burned, or permitted to escape into the air constitutes waste**, except that

(1) flaring or venting gas for a period not exceeding one hour as the result of an

emergency or operational upset is authorized for safety;

(2) flaring or venting gas for a period not exceeding one hour as the result of a **planned lease operation** is authorized for safety;

(3) flaring pilot or purge gas **to test or fuel the safety flare system** is authorized for safety;

(4) de minimis* venting of gas incidental to normal oil field operations is authorized;

(5) within 90 days after receipt of the report required under (b) of this section, the commission will, in its discretion, authorize the flaring or venting of gas for a period exceeding one hour

(A) if the flaring or venting is necessary for facility operations, repairs, upgrades, or testing procedures;

(B) if an emergency that threatens life or property requires the flaring or venting, unless failure to operate in a safe and skillful manner causes the emergency; or

(C) if the flaring or venting is necessary to prevent loss of ultimate recovery;

(6) upon application, the commission will, in its discretion, authorize the flaring or venting of gas for purposes of testing a well before regular production.

(e) Notwithstanding an authorization under

(d) of this section, the commission will, in its discretion, review flaring or venting of gas and classify as waste any volume of gas flared or vented in violation of

(c) of this section.

(f) Notwithstanding conservation orders that the commission issued before 1/1/95, *this section applies to flaring or venting of gas that occurs on or after 1/1/95.*

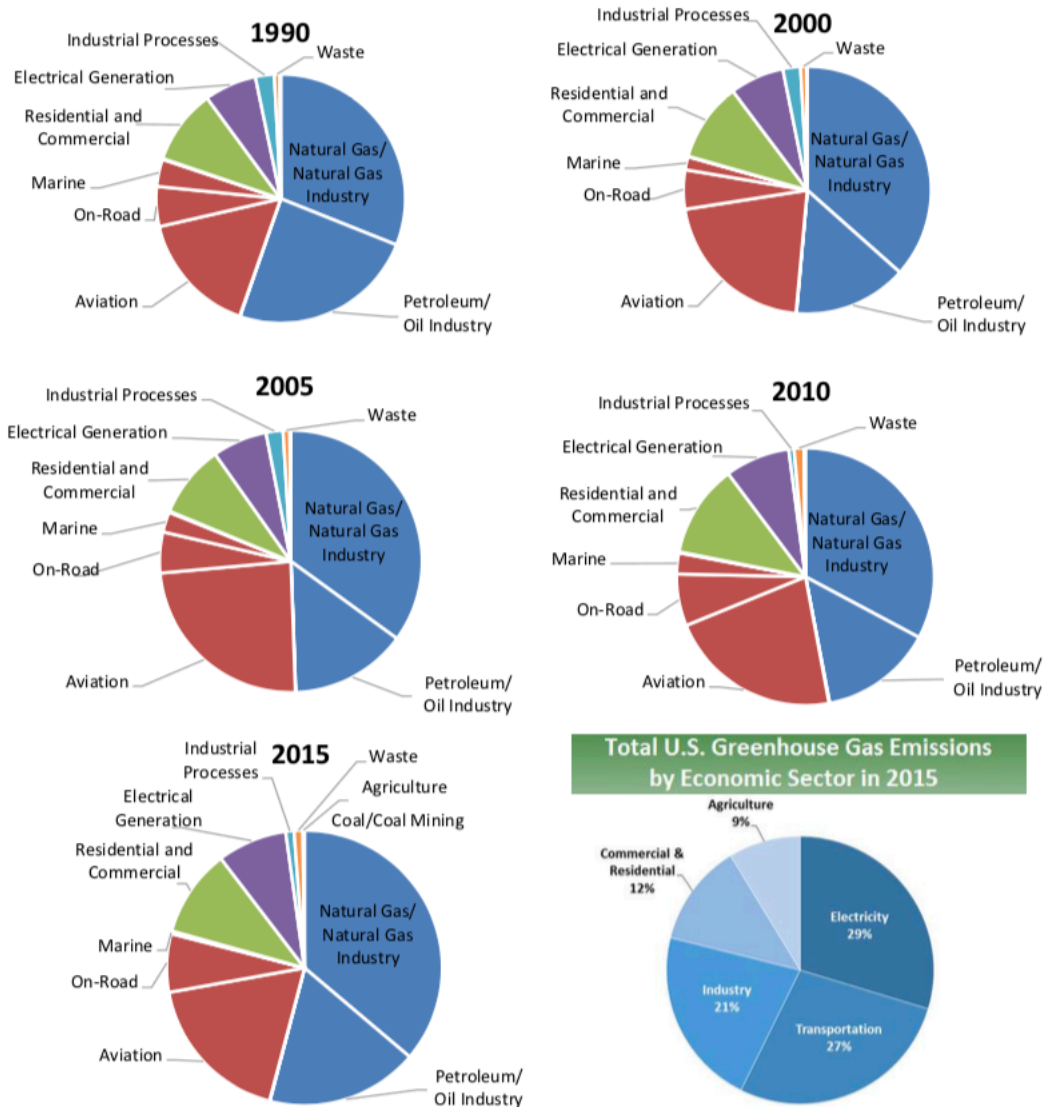
Exhibit 5 – Alaska Emissions by Sector with Total U.S. Emissions for Comparison¹²

Exhibit 5: Alaska distribution of emissions by sector with total U.S. Greenhouse Gas Emissions by Economic Sector for comparison. In the Alaska Emission charts, the industrial sector has been divided into natural gas/natural gas industry and petroleum/oil industry. The transportation sector in 2015 has been divided into aviation, on-road, and marine. Total U.S. Greenhouse Gas Emissions by Economic Sector in 2015 shows that the top GHG contributor on average is the electricity sector followed by transportation and industry.

¹² EPA: Sources of Greenhouse Gas Emissions

Exhibit 4 – Alaska's Greenhouse Gas Emissions by Sector and Fuel Type (MMT CO₂e)

	1990	2000	2005	2010	2011	2012	2013	2014	2015
Electrical Generation	3.05	3.62	3.69	3.51	3.64	3.61	3.11	3.35	3.38
Coal	0.45	0.78	0.57	0.56	0.56	0.59	0.55	0.93	1.03
Natural Gas	1.87	1.89	2.10	2.12	2.25	2.14	1.81	1.70	1.61
Petroleum	0.73	0.95	1.02	0.83	0.83	0.88	0.76	0.73	0.75
Residential and Commercial	4.36	5.27	4.90	5.02	4.60	4.51	4.07	3.90	4.25
Coal	0.77	0.80	0.77	0.84	0.92	0.90	0.87	0.81	0.83
Natural Gas	1.80	2.32	1.86	1.85	2.13	2.22	2.02	1.90	1.97
Petroleum	1.78	2.14	2.24	2.30	1.52	1.38	1.15	1.16	1.43
Wood (CH ₄ and N ₂ O)	0.012	0.013	0.019	0.022	0.018	0.017	0.023	0.023	0.018
Industrial	24.87	26.33	27.02	20.26	22.67	22.37	22.13	20.99	22.35
Coal/Coal Mining	0.026	0.026	0.024	0.038	0.045	0.038	0.029	0.028	0.022
Natural Gas/ Natural Gas Industry	13.95	18.70	19.13	14.12	14.00	14.44	14.24	14.30	14.94
Petroleum/Oil Industry	10.90	7.60	7.86	6.10	8.63	7.89	7.86	6.66	7.39
Transportation	11.18	14.31	17.37	13.36	11.41	11.10	10.70	9.90	10.42
Aviation	7.21	10.78	13.18	9.37	8.59	8.23	7.80	6.98	7.45
Marine	1.59	0.87	1.36	1.13	0.08	0.07	0.07	0.08	0.08
On-Road	2.33	2.62	2.75	2.81	2.67	2.72	2.76	2.79	2.83
Rail and Other	0.059	0.043	0.082	0.060	0.070	0.070	0.060	0.057	0.054
Industrial Processes	1.10	1.17	1.14	0.29	0.35	0.38	0.39	0.40	0.40
Ammonia Production	1.050	0.966	0.885	0.000	0.000	0.000	0.000	0.000	0.000
Urea Production	0.001	0.000	0.000	0.000	0.000	0.001	0.001	0.001	0.001
Limestone and Dolomite Use	0.000	0.010	0.007	0.000	0.000	0.000	0.000	0.000	0.000
Cement Manufacture	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ODS Substitutes (HFC, PFC)	0.001	0.169	0.224	0.264	0.337	0.350	0.360	0.373	0.373
Soda Ash (CO ₂)	0.006	0.006	0.006	0.005	0.005	0.005	0.005	0.005	0.005
Electric Power T&D	0.042	0.023	0.023	0.020	0.011	0.023	0.023	0.023	0.023
Waste	0.32	0.40	0.45	0.53	0.59	0.59	0.42	0.38	0.43
Solid Waste Management	0.27	0.34	0.39	0.46	0.54	0.53	0.36	0.32	0.37
Wastewater Management	0.052	0.060	0.065	0.069	0.059	0.059	0.060	0.060	0.060
Agriculture	0.05	0.05	0.07	0.08	0.07	0.07	0.07	0.08	0.08
Agricultural Soils	0.030	0.026	0.031	0.033	0.030	0.031	0.029	0.034	0.028
Enteric Fermentation	0.015	0.019	0.026	0.025	0.028	0.028	0.026	0.023	0.025
Manure Management	0.001	0.007	0.009	0.021	0.015	0.015	0.014	0.023	0.023
Gross Emissions	44.93	51.16	54.64	43.04	43.34	42.63	40.88	39.01	41.30
Emission Sinks	-6.50	-25.20	5.20	22.37	29.45	-29.49	-23.57	-29.80	-1.74
Net Emissions	38.43	25.96	59.84	20.67	13.89	13.14	17.31	9.20	39.56
Gross Increase Since 1990 (MMT)	0.00	6.23	9.71	-1.89	-1.59	-2.30	-4.05	-5.92	-3.63
Gross Increase since 1990 (%)	0%	14%	22%	-4%	-4%	-5%	-9%	-13%	-8%

Exhibit 4: The low level of emission sink benefits in 2005 and 2015 is in part due to active wildfire seasons. Coal usage for electrical generation increased from 1990 to 2015. Reduction in the percentage of marine transport emissions since 2010 is related to exclusion of bulk fuel from calculations as the fuel is not burned in Alaska. Production at Agrium USA began to fall beginning in 2001 leading to a sharp decline in emissions from industrial process in 2005 and 2006. Agrium USA officially announced closure in late 2007.